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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,627	07/05/2006	Josef Aspelmayr	S3-03P04867	1314

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EXAMINER
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MCCALISTER, WILLIAM M

ART UNIT	PAPER NUMBER
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3753

MAIL DATE	DELIVERY MODE
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09/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<p><b>Application No.</b> 10/567,627</p>	<p><b>Applicant(s)</b> ASPELMAYR ET AL.</p>	
	<p><b>Examiner</b> WILLIAM MCCALISTER</p>	<p><b>Art Unit</b> 3753</p>	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 10 September 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: \_\_\_\_\_.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

/Robin O. Evans/  
Supervisory Patent Examiner, Art Unit 3753

/WILLIAM MCCALISTER/  
Examiner, Art Unit 3753

Continuation of 11. does NOT place the application in condition for allowance because:

Applicant quotes passages from Wirbeleit which, if taken alone may suggest to a layman that use of the pressure compensation piston 10 results in determination of an actuator voltage entirely without regard to fuel pressure. However, the passages must be evaluated as they would be taken in context by one of skill in the art. Importantly, one of skill would recognize that the applied actuator voltage has two components: a DURATION that determines the INJECTION TIME, and a magnitude that determines the effective cross-sectional area of the orifice injection opening (col. 3 lines 5-7).

It is the purpose of Wirbeleit that "the injection time can be adjusted independently of the fuel injection pressure" (Wirbeleit, col. 1 lines 59-63; Applicant's Remarks, p. 3). One of skill would therefore recognize that this is the same as adjusting the DURATION of the actuator voltage independently of the fuel pressure.

As explained by Wirbeleit, this necessarily requires adjustment of the MAGNITUDE of the actuator voltage (i.e., the orifice cross-sectional area) based on the fuel pressure (Wirbeleit, col. 3 lines 12-16):

"It is pointed out that with the injector described herein the orifice cross-section of the fuel injector can be controlled so that, with a particular fuel supply pressure and a particular quantity of a fuel to be injected, the injection time is adjustable depending on engine operating parameters."

Even without this passage, this requirement would be self-evident to one of skill in the art. In order for a particular quantity of fuel to be injected, any adjustment of the injection duration would require an inversely proportional adjustment of the size of the injection opening. This is because a greater quantity of fluid per unit time will flow through a large opening than will flow through a small opening. Applicant's attention is also directed to US 5,601,067 which very clearly discloses that it was known to determine an actuation voltage based on a pressure reading.

Applicant also argues that the position of the orifice control needle 5 does not provide an indication of the pressure in the pressure chamber 13 (Remarks, p. 4). Applicant's attention is directed to the passage at col. 2, lines 55-58, which states "[t]he pressure compensation piston 10 is surrounded by a needle position sensor 19 which continually senses the position of the orifice control needle 5 and whose signals are entered into an electronic control unit 20". The Examiner maintains that the moveable "pressure compensation piston 10", with a lower surface area exposed to "pressure chamber 13", does have a position which is indicative of the pressure in the pressure chamber 13.

Moreover, because the position of piston 10 is indicated (along with that of needle 5) via sensor 19 and sent to control unit 20, the control unit "acquires an external measured variable in the form of pressure at the valve", as claimed. That is, the position indicates the pressure because the pressure determines the position. Such an interpretation is on par with that of traditional pressure sensors, which transmit signals in terms of different physical parameters. Piezoresistive pressure sensors utilize a change in conductivity, and Bourdon gauges utilize a change in deflection of a tube. This interpretation is also consonant with Applicant's disclosure, which does not discuss transmitting a fluid (and its associated pressure) directly to the electronic controller (presumably because this would cause a short in the electronic circuit).

It is noted that although the current claim language is seen as broad, Applicant's invention has several unclaimed structural features that would distinguish over the art of record.